



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,044	07/18/2003	Qi Qu	020569-02600 (P202-1291-U)	6445
54487	7590	02/02/2006	EXAMINER	
JONES & SMITH, LLP THE RIVIANA BUILDING 2777 ALLEN PARKWAY, SUITE 800 HOUSTON, TX 77019-2141			HRUSKOCI, PETER A	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 02/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/623,044

Applicant(s)

QU ET AL.

Examiner

Peter A. Hruskoci

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2006 and 20 December 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 18-23, 25-55 and 57 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-15, 18-23, 25-55 and 57 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Art Unit: 1724

Claim 40 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. In claim 40 "principally contains...and/or zinc" lacks clear antecedent basis in the specification as originally filed, and appears to be drawn to new matter.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 8, 10, 11, 13-15, 27, 52, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darlington et al. 4,465,598 in view of Barthrope 5,302,297. Darlington et al. disclose (see col. 1 line 6 through col. 3 line 57) a method of reclaiming a well completion brine substantially as claimed. The claims differ from Darlington et al. by reciting that the brine is mixed with an organic chelant. Barthrope et al. disclose (see col. 2 line 48 through col. 4 line 46) that it is known in the art to add an organic chelant to a brine from a production well bore, to aid in forming insoluble salt precipitates in the brine solution. It would have been obvious to one skilled in the art to modify the method of Darlington et al. by addition of the recited chelant in view of the teachings of Barthrope et al., to aid in removing insoluble salt precipitates from the brine.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Darlington et al. 4,465,598 in view of Barthrope 5,302,297 as above, and further in view of Dobson et al.

Art Unit: 1724

5,783,527. The claim differs from the references as applied above by reciting that the oxidizer in calcium or magnesium peroxide. Dobson et al. disclose (see col. 2 line 51 through col. 5 line 50) that it is known in the art to add the recited peroxides to a well completion brine, to aid in liberating hydrogen peroxide in the brine. It would have been obvious to one skilled in the art to modify the references as applied above, by addition of the recited peroxides in view of the teachings of Dobson et al., to aid in oxidizing metal ions in the brine.

Claims 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Darlington et al. 4,465,598 in view of Barthrope 5,302,297 and Dobson et al. 5,783,527 as above, and further in view of Skee et al. 5,989,353. The claim differs from the references as applied above by reciting that the organic chelant is benzoic acid. Skee al. disclose (see col. 6 lines 1-23) that it is known in the art to utilize benzoic acid as a metal chelating agent. It would have been obvious to one skilled in the art to modify the references as applied above, by addition of the recited chelant in view of the teachings of Skee et al., to aid in removing insoluble precipitates from the brine.

Claims 9, 12, 20-23, 27, 31-33, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darlington et al. 4,465,598 in view of Barthrope 5,302,297 as above, and further in view of Skee et al. 5,989,353. The claims differ from the references as applied above by reciting the use of specific organic chelants. Skee al. disclose (see col. 6 lines 1-23) that it is known in the art to utilize the recited chelants to aid in chelating metal in solutions. It would have been obvious to one skilled in the art to modify the references as applied above, by addition of the recited chelants in view of the teachings of Skee et al., to aid in removing insoluble precipitates from the brine.

Art Unit: 1724

Claims 15, 18, 19, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darlington et al. 4,465,598 in view of Barthrope 5,302,297 as above, and further in view of Crudden et al. 5,821,215. The claims differ from the references as applied above by reciting that the use of specific organic chelants. Crudden al. disclose (see col. 2 line 5 through col. 4 line 59) that it is known in the art to utilize the recited chelants to aid in chelating or sequestering heavy metal ions in solutions. It would have been obvious to one skilled in the art to modify the references as applied above, by addition of the recited chelants in view of the teachings of Crudden et al., to aid in removing insoluble precipitates from the brine.

Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Darlington et al. 4,465,598 in view of Barthrope 5,302,297 and Crudden et al. 5,821,215 as above, and further in view of Simon et al 4,507,208. The claim differs from the references as applied above by reciting that the addition of an absorbent to the brine. Simon et al. disclose (see col. 3 line 3 through col. 6 line 61) that it is known in the art to add activated charcoal to drilling fluids, to aid in absorbing organic materials from the fluid. It would have been obvious to one skilled in the art to modify the references as applied above, by addition of the recited absorbent in view of the teachings of Simon et al., to aid in removing organic materials from the brine.

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Darlington et al. 4,465,598 in view of Barthrope 5,302,297 as above, and further in view of Amiya et al. 6,335,398. The claim differs from the references as applied above by reciting that the use of specific organic chelants. Amiya et al. disclose (see col. 4 line 19 through col. 10 line 45) that it is known in the art to utilize the recited chelants to aid in chelating metal ions in solutions. It would have been obvious to one skilled in the art to modify the references as applied above, by

Art Unit: 1724

addition of the recited chelant in view of the teachings of Amiya et al., to aid in removing insoluble precipitates from the brine.

Claims 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Darlington et al. 4,465,598 in view of Barthrope 5,302,297 as above, and further in view of Amano et al. 4,908,080. The claim differs from the references as applied above by reciting that the use of a specific organic chelant . Amano et al. disclose (see col. 3 lines 53-65) that it is known in the art to utilize the recited chelant to aid in inorganic salt solutions. It would have been obvious to one skilled in the art to modify the references as applied above, by addition of the recited chelant in view of the teachings of Amiya et al., to aid in removing insoluble precipitates from the brine.

Claims 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Darlington et al. 4,465,598 in view of Barthrope 5,302,297 as above, and further in view of Nagai et al. 4,559,216. The claim differs from the references as applied above by reciting that the use of a specific organic chelant . Nagai et al. disclose (see col. 3 lines 2-48) that it is known in the art to utilize the recited chelant to aid in chelating metal ions in solutions. It would have been obvious to one skilled in the art to modify the references as applied above, by addition of the recited chelant in view of the teachings of Nagai et al., to aid in removing insoluble precipitates from the brine.

Claims 31, 32, 34-37, 41, and 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darlington et al. 4,465,598 in view of Barthrope 5,302,297 as above, and further in view of Kawasaki al. 6,139,973. The claims differ from the references as applied above by reciting that the use of specific organic chelants . Kawasaki et al. disclose (see col. 9 lines 15-41) that it is known in the art to utilize the recited chelants to aid in chelating metal ions

Art Unit: 1724

in solutions. It would have been obvious to one skilled in the art to modify the references as applied above, by addition of the recited chelants in view of the teachings of Kawasaki et al., to aid in removing insoluble precipitates from the brine.

Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darlington et al. 4,465,598 in view of Barthrope 5,302,297 as above, and further in view of Anderson et al. 6,758,967. The claims differ from the references as applied above by reciting that the use of specific organic chelants. Anderson et al. disclose (see col. 3 line 35 through col. 7 line 35) that it is known in the art to utilize the recited chelants, to aid in chelating metal ions in solutions. It would have been obvious to one skilled in the art to modify the references as applied above, by addition of the recited chelants in view of the teachings of Anderson et al., to aid in removing insoluble precipitates from the brine.

Claims 48 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darlington et al. 4,465,598 in view of Barthrope 5,302,297 as above, and further in view of Horton et al. 5,211,859. The claims differ from the references as applied above by reciting that the use of specific organic chelants. Horton et al. disclose (see col. 3 line 62 through col. 4 line 4) that it is known in the art to utilize the recited chelants to aid in chelating aluminum ions in solutions. It would have been obvious to one skilled in the art to modify the references as applied above, by addition of the recited chelants in view of the teachings of Horton et al., to aid in removing insoluble precipitates from the brine.

Claims 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darlington et al. 4,465,598 in view of Barthrope 5,302,297 as above, and further in view of Horiguchi et al. 4,317,882. The claims differ from the references as applied above by reciting

Art Unit: 1724

that the use of specific organic chelants . Horiguchi et al. disclose (see col. 3 line 64 through col. 4 line 11) that it is known in the art to utilize the recited chelants to aid in chelating metal ions in solutions. It would have been obvious to one skilled in the art to modify the references as applied above, by addition of the recited chelants in view of the teachings of Horiguchi et al., to aid in removing insoluble precipitates from the brine.

Claims 54 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darlington et al. 4,465,598 in view of Barthrope 5,302,297 as above, and further in view of Simon et al 4,507,208. The claims differ from the references as applied above by reciting that the addition of an absorbent to the brine. Simon et al. disclose (see col. 3 line 3 through col. 6 line 61) that it is known in the art to add activated charcoal to drilling fluids, to aid in absorbing organic materials from the fluid. It would have been obvious to one skilled in the art to modify the references as applied above, by addition of the recited absorbent in view of the teachings of Simon et al., to aid in removing organic materials from the brine.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b). Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-5, 8, 15, 18, 19, 39, 40, 52-55, and 57 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

Art Unit: 1724

claims 1-27 of copending Application No. 11/145,281. Although the conflicting claims are not identical, they are not patentably distinct from each other because the method steps recited in the instant claims appear to be encompassed by the claims of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

It is noted since the inventive entities of the above applications are different, applicants should verify that the inventions were commonly owned at the time the inventions were made.

Applicants argue that a complex metal precipitate is not formed in Barthrope, since Barthrope discloses that the precipitate is an inorganic salt such as barium sulfate. It is submitted that the metal precipitate formed in Barthrope appears to include polydentate ligands or complexes adsorbed onto the inorganic salt crystals or metal precipitate. Furthermore, applicants have not provided sufficient factual evidence to support the above argument.

Applicants arguments concerning Dobson, Skee, Crudden, Simon, Amiya, Nagai, Kawasaki, Anderson, Horton, Horiguchi, and Simon, are based on the propriety of the combination of Darlington and Barthrope. This combination is deemed properly applied for reasons stated above. Furthermore, it would have been obvious to one skilled in the art having the references before him, to modify combination of Darlington in view of Barthrope by utilizing the organic metal chelants disclosed in the above tertiary references, to aid in forming a complex metal precipitate, absent a sufficient showing of unexpected results.

Claim 1 properly written to recite that the metal impurities include iron, and the complex metal precipitate includes iron, would be allowable in view of the test results shown in the instant Examples.

Art Unit: 1724

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter A. Hruskoci whose telephone number is (571) 272-1160. The examiner can normally be reached on Monday through Friday from 6:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1724

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Peter A. Hruskoci
Primary Examiner
Art Unit 1724

1/30/06